

Infection control - hygiene

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In October 2002, the Center for Disease Control and Prevention (CDC) published its updated "Guideline for Hand Hygiene in Health Care Settings". Based mainly on hospital-derived data, the document provides workers in all healthcare settings with a scientific review, specific recommendations for disease transmission through, appropriate hand hygiene and guidance on related issues like surgical hand antiseptics and skin care.

Hand hygiene products for healthcare personnel are the regulatory jurisdiction of the U.S. Food and Drug Administration (FDA).

FDA currently uses three classifications to identify these products: patient preoperative skin preparations, antiseptic hand washes and surgical hand scrubs.

Antimicrobials deemed "safe and effective for use in antiseptic hand washes" include ethanol and povidone iodine.

New products

Since the CDC's last hand hygiene recommendations (published in 1985), a newer category of antiseptic products has been making its way into healthcare settings.

Waterless antiseptic agents are alcohol-based gels, foams or rinses that don't require the use of water. The preparations are simply applied to the hands, which then are rubbed together to coat all surfaces. The agents found acceptance in some hospitals, where health care worker compliance with hand washing recommendations traditionally has been less than ideal.

According to studies summarized in the new CDC guideline, the waterless, alcohol-based products are more effective at reducing microbial flora on health care worker hands than a plain soap or antimicrobial hand wash.

They even have helped improve hand hygiene and reduce disease transmission in hospitals, where access and time to use hand-washing stations may be severely limited.

Concentrations of 60-95% alcohol are most effective; higher concentrations are actually less potent. Formulations containing emollients are also reported to reduce the incidence of skin chapping and irritation.

On the downside, alcohols are not appropriate for use when hands are visibly soiled or contaminated with organic material. Furthermore, their efficacy is affected by a number of factors; including the type and concentration of alcohol in the formula, contact time, and whether the hands are wet when the alcohol is applied. Volume is also a factor: applying a small amount of alcohol to the hand is no more effective than washing with plain soap and water.

In the dental setting

Although waterless antiseptics appear to have been successful in the hospital settings, what do they mean for dentistry, where the majority of procedures are performed with gloved hands, patients generally are not in acute medical distress and highly susceptible to infection and after gloving is routine for the dental team? Individual dental practices may have to answer that question on their own.

CDC recommendations allow for routine hand washing to continue. Some experts feel that since the techniques are familiar and compliance is high among dental workers, there is no need for a change. Others suggest that adding alcohol-based hand rubs may help combat dry skin from frequent hand washing or may speed hand hygiene in institutions and large dental clinics, where team members quickly move from one patient to the next.

To find what's best for your practice:

1. Carefully evaluate your current hand hygiene practices and compliance;
2. Solicit input from the staff regarding the feel, fragrance and skin tolerance of any products under consideration (for soaps, ease of lathering may also be a factor);
3. Get information from manufacturers on known interactions between hand and hygiene products, skin care products and glove materials (e.g., some petroleum-based creams degrade glove materials) and
4. Evaluate dispensers to ensure adequate function and delivery of the product.

Desirable characteristics for both traditional and no-rinse hand hygiene products include low irritancy potential, broad-spectrum antimicrobial activity and staff acceptance.

While cost must always be considered, it should not be the primary factor. Ineffective products or products that staff fails to use are never a wise purchasing choice.

In summary

Because they should not be used on visibly soiled hands, alcohol rubs cannot ever fully replace the need for soaps or other hand hygiene in any health care setting. Nonetheless, they may be highly useful when water facilities are unavailable or during "boil water" advisories. For dentistry, the antiseptic hand rub simply offers a new option for applying an old tenet: keeping your hands clean helps keep you and your patients safe and healthy.

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